

## 1 Introduction

1.1 This manual of USE procedures is for jurisdictions using the portion of the Diebold Election System consisting of the AccuVote Optical Scan (model D) with 1.96.6 firmware and Gems Software version 1.18.19 or 1.18.24 in conjunction with the Vote-PAD (Voting-on-paper Assistive Device). The System components are listed below.

- + Diebold AccuVote Optical Scan (model D) with firmware 1.96.6\*
- + GEMS Software Version 1.18.19 or 1.18.24\*

*\*(Note: the required use procedures for these components are described in the procedures submitted November 14, 2005 by Diebold Election Systems, Inc and approved for use by the Secretary of State. The procedures described therein are incorporated by reference and as attached.)*

- + Vote-PAD Booklets
- + Preparation tools
- + Poll site tools
- + Verification wand
- + Vote-PAD User's Guide
- + Poll Workers' Guide
- + Vote-PAD Instruction Assistant

**Vote-PAD booklet.** The Vote-PAD booklet consists of a spiral bound booklet varying in size to accommodate the 11", 14" and 18" ballot sizes produced by the Diebold Election System. The booklet contains a privacy shield and one or more ballot sleeves designed to accommodate the paper ballot used by the Diebold system. A page turning aid is attached to each ballot sleeve and the front and back covers to assist voters in turning the pages.

### **Preparation tools.**

- + A punch matching the size and shape of the voting positions on the Diebold ballot, a plastic anvil. A large oblong punch to accommodate write-in positions.
- + A small (1/8") punch to produce alignment holes to insure proper alignment of the ballot when inserted into the ballot sleeve.
- + Bumpons – oval (small black oval rubber indicators) to indicate the various voting positions to the voter.
- + Bumpons – Triangle (triangular shaped rubber indicators) used to indicate the top and bottom of each column on the ballot.

### **Poll site tools.**

- + Braille Overview booklet
- + Audio Overview tape
- + Large-Print Overview booklet
- + Pollworkers' guide
- + Tape player/headset
- + Verification Wand
- + Non-skid mats
- + Magnification sheet
- + Vote-PAD Poll Workers' Quick Reference Guide

**Verification wand.** A battery powered hand held device which allows voters with visual impairment to review their selection. As they replay the audio tape, or re-read the Braille or

large-print instructions, they touch the wand to each marking location to receive feedback indicating whether or not the location is marked. The wand vibrates when it senses a mark and is still when there is no mark.

**Vote-PAD User's Guide.** The User's Guide contains complete instructions on preparing the Vote-PAD booklets for use at the polls as well as instructions for the preparation of the audio tape, the Braille or large-print instructions. Reference is made to the User's Guide and it is incorporated as part of these procedures.

**Poll Workers' Guide.** The Poll Workers' Guide contains complete instructions for the poll workers on setting up the Vote-PAD for each voter, the use of the Vote-PAD by the voters and processing voted ballots. Reference is made to the Poll Workers' Guide and it is incorporated as part of these procedures.

**Vote-PAD Instruction Assistant.** The Instruction Assistant is used to create the text for the audio tape, Braille, and large-print instructions. The Assistant is a set of Microsoft Excel macros designed specifically for use with the Vote-PAD, and is used in conjunction with commercial Text-to-Speech (TTS) program, NaturalSoft. Since the processing is done by Excel macros, the source code of the macros is available for examination. (*Note: The audio tape, Braille, and large-print instructions may be prepared manually without the aid of the Instruction Assistant.*)

## 1.2 Terms and Definitions

- + Ballot sleeve -- a clear plastic sleeve designed to hold a ballot in a specific alignment. The sleeve has various navigation aids (bumpers) attached to allow the visually impaired to locate the voting positions (with the aid of audio tape, braille, or large-print instructions) of the various candidates and measures contained on a ballot. The bumpers indicate the location of marking holes in the ballot sleeve which correspond to the voting positions on the ballot. The marking holes allow the disabled voter to properly mark the ballot for reading by the AccuVote scanner.
- + Braille Instructions – Instructions written in Braille to instruct the visually impaired voter as to the locations of the various races and measures contained on the ballot. These instructions can be prepared manually or with the aid of the Vote-PAD Instruction Assistant.
- + Audio Instructions – Instructions contained on audio tape, or other, electronic medium to instruct the visually impaired voter as to the locations of the various races and measures contained on the ballot. These instructions can be prepared manually or with the aid of the Vote-PAD instruction assistant.
- + Large-Print Instructions – Instruction printed in large type font (28 point bold, Ariel) to instruct the voter as to the locations of the various races and measures contained on the ballot. These instructions can be prepared manually or with the aid of the Vote-PAD instruction assistant.
- + Verification wand -- A hand held battery powered device provided to the voter for use in verifying that the ballot has been marked in accordance with the wishes of the voter. When placed on a voted position the device vibrates. When no marks are present the device is silent. After voting the ballot with the aid of the various instructions the voter will review the ballot with the instructions placing the wand on

each voting position to determine if the ballot is correctly marked. The voter will also be able to use the verification wand to determine that the ballot has been properly positioned in the ballot sleeve.

- + Privacy Shield – A movable plastic shield contained in the cover of the Vote-PAD to insure the secrecy of a ballot while being placed in an optical scan unit or ballot box.
- + Identification Labels – Labels attached to the Vote-PAD booklet, the audio instructions and other instruction material containing ballot type and precinct information to insure that the correct instructions are provided with the Vote-PAD booklet.
- + Punch and Plastic Anvil – The punch and plastic anvil are used to create marking holes in the ballot sleeve at the voting positions of the various races and measures contained on the ballot.
- + Marking Holes – Holes in the ballot sleeve at the voting positions on the ballot.
- + Bumpons – Rubber ovals and triangles to provide the visually impaired with ability to locate the various contests contained on the ballot. The ovals are located at each voting position and the triangles are located at the top and bottom of the various columns on the ballot.
- + Text-to-speech program – A third party software program (NaturalSoft) used with the Instruction Assistant to produce the audio files used by the visually impaired voter.
- + Write-in Sheets – A separate sheet that may be used by the voter as an aid to writing in a candidate. The sheet contains an embossed grid with Braille and printed numbers and letters. The audio, Braille and large-print instructions describe the use of the write-in sheet to the voter.
- + Page turning Aids – Plastic covered metal clips attached to the front and back covers and each ballot sleeve of the Vote-PAD to aid in turning the pages.
- + Voting position – The area on the Diebold optical scan ballot used to indicate the voters' choice.
- + Non skid pad – A rubberize pad provided to the voter to help hold the Vote-PAD in place while being used by the voter.
- + “Guide to Content Choices” -- The data contained in the audio tape, Braille, or large print instructions.
- + Security Seal – A tamper proof seal with an unique Identification number. The seal must be of such a design that it will be readily apparent that it has been opened after being affixed.

## **2 Ballot Definition**

- 2.1 -- Ballot Definition information is covered in the Procedures Required for Use of the Diebold Election Systems submitted November 14, 2005 and incorporated herein.

## **3 System Installation and Configuration – See Diebold procedures.**

- 3.1 Hardware requirements and specifications – See Diebold procedures.
- 3.2 Hardware and network set-up and configuration – See Diebold procedures.
- 3.3 Software installation and configuration Are there installation options that must be installed or should not be installed for use in California? See Diebold procedures. The

Microsoft Excel macros used by the Vote-PAD instruction assistant requires a PC running Microsoft Excel and should not to be installed on the Hardware running the Diebold Gems software described in the Diebold procedures. The same is true of the NaturalSoft Text-To-Speech software. These programs are not used in the production of ballots, counting of ballots or reporting of results. Their sole purpose is to aid in the preparation of the audio, Braille and large-print instructions.

- 3.4 Acceptance Testing Certification Procedures, Article 13 requires an election jurisdiction to perform acceptance testing whenever it acquires a new voting system or whenever the voting system is modified. The results of that acceptance testing are to be certified to the Secretary of State. Because there is no computer hardware included with Vote-PAD acceptance testing will consist of using the User's Guide to prepare Vote-PAD booklets, audio, Braille and large-print instructions and then using the logic and accuracy process to verify that the booklets and instructions have been prepared to properly match the test ballots (a mock election set up in Gems will provide data for this testing). The logic and accuracy testers will follow the Poll Workers' Guide to determine that the Guide is complete and covers all contingencies. The results of this testing will be forwarded to the Secretary of State as required.
- 3.5 Software and firmware upgrades Detail how software and firmware upgrades will be distributed and how they are to be applied. Software upgrades to Instruction Assistant and NaturalSoft will be forwarded to the Secretary of State for distribution by that office. Upgrades will replace existing files located on each PC using the programs. As upgrades are installed logs will be maintained indicating the version numbers and dates of upgrade. The logs shall be maintained for inspection.

#### **4 Election Set-up and Definition**

- 4.1 Programming and configuration of election management system/software, including audit records to be generated and retained – See Diebold procedures
- 4.2 Programming and configuration of vote recording/tabulation devices, including audit records to be generated and retained – See Diebold procedures
- 4.3 System diagnostic testing procedures, including audit records to be generated and retained – See Diebold procedures
- 4.4 System proofing System proofing for the Vote-PAD consists of verifying that the ballot sleeves are properly created to match the ballot positions for the ballot they are set up for. The elections official will verify the labels on the booklets, audio tapes and other material against the ballot placed in the sleeve and that the positions cut in the sleeve to indicate ballot positions exactly match the voting positions on the specific ballot type. Once the system has been proofed a security seal will be placed on the booklet to insure that the booklet has not been tampered with after creation and testing. A log will be kept with the time, date and names of the official who attached the seal and parties doing the testing.
- 4.5 Logic and accuracy testing of system and components – Logic and accuracy testing will be done in conjunction with the Diebold procedures.
  - 4.5.1 Pre-conditions for performance of tests, including test decks – as described in the Diebold procedures.
  - 4.5.2 Accuracy Test procedures – In addition to the Diebold procedures an additional ballot with at least one position for each candidate and measure marked using the Vote-PAD will be included. Also, one ballot will be fully marked (each voting position marked) with a marking devise that leaves residue on the ballot sleeve at each voting position. This will insure that anyone using the Vote-PAD will not be able to determine how anyone using it before has voted. The ballots marked with the Vote-PAD should be

reviewed to determine that the marks correspond to the valid voting positions on the ballot. These ballots will be run through an AccuVote scanner and results compared with the ballots to insure that each position is being properly read by the AccuVote scanner.

- 4.5.3 Logic Test procedures – See Diebold procedures
- 4.5.4 Retention of test materials – In addition to the Diebold procedures the test ballots created using the Vote-PAD shall be retained so as to be identified separately from the balance of the test ballots.
- 4.5.5 Logic and Accuracy Board and certification of testing – See Diebold procedures. In addition the logic and accuracy board will review the materials produced by the testing of the ballots marked with the Vote-PAD booklets. They shall also review the audio tape and large-print instructions to verify they correctly identify the voting positions on the ballot and on the Vote-PAD booklet. If necessary, an independent party trained in reading Braille shall provide documentation that the Braille instructions match the voting positions on the ballot.
- 4.6 Ballot tally programs – See Diebold procedures
- 4.7 Election Observer Panel – See Diebold procedures
- 4.8 Hardware maintenance and preparation for use – See Diebold procedures. In addition the function of each verification wand should be tested (ideally as part of the logic and accuracy testing), fresh batteries shall be installed. The Audio device (tape player) shall be checked for function. Batteries, if required, shall be replaced.

## **5 Polling Place Procedures**

- 5.1 Precinct supplies, delivery and inspection – In addition to the materials listed in the Diebold procedures the following shall be included and precinct workers will inspect for.
  - + For each ballot type
    - + One Vote-PAD booklet (depending on the number of expected disabled voters more than one Vote-PAD may be required)
    - + An audio tape with the “Guide to Contest Choices”
    - + A Braille booklet with the “Guide to Contest Choices”
    - + A large-print booklet with the “Guide to Contest Choices”
    - + Write-in sheets
    - + One non-skid pad
  - + For each polling place
    - + At least one tape player with headset
    - + Verification wand
    - + Removable tape
    - + Magnification sheet
    - + Foam grips for pencil
    - + Unused foam ear pads for the headset
    - + Spare (fresh) batteries for the tape player and verification wand
    - + Stapler
- 5.2 Polling place set-up – In addition to Diebold procedures there shall be a voting station set up with sufficient space to open the Vote-PAD booklet alone with space for the tape player and or Braille or large-print instructions. The station shall provide adequate seating and privacy to allow the voter time to vote and to vote in secret (depending on the number of expected disabled voter more that one station may be required).
- 5.3 Opening the polls – see Diebold procedures

- 5.4 Polling place procedures For DREs, include how to handle a “fleeing voter” -- see Diebold procedures
- 5.5 Special needs voters Voters with limited dexterity and the visually impaired voters will be allowed to vote using the Vote-PAD booklets along with the audio, Braille and large-print instructions. Wheel chair voters will be able to vote using the Diebold optical scan ballot with the Vote-PAD or without as needed. The provided voting station will be suitable for wheel chair access if needed. Special needs voters will be provided with a write-in sheet to accommodate the write-in process. If used, the write-in sheet shall be stapled to the voted ballot and both shall be inserted in the ballot storage slot in the AccuVote ballot box for processing during the canvass.
- 5.6 Provisional voters – see Diebold procedures
  - 5.6.1 In precinct – see Diebold procedures
  - 5.6.2 Out of precinct – see Diebold procedures
- 5.7 Closing the polls and vote reporting – see Diebold procedures
- 5.8 Securing audit logs and back-up records – see Diebold procedures
- 5.9 Troubleshooting and problem resolution – see Diebold procedures
- 6 **Absentee/Mail Ballot Procedures (Central Tabulation)** – see Diebold procedures
  - 6.1 System start-up and pre-tabulation report procedures
  - 6.2 Tabulation procedures
  - 6.3 Post-tabulation report and shutdown procedures
- 7 **Semi-Official Canvass Tabulation and Reporting** – see Diebold procedures
  - 7.1 System start-up and pre-tabulation reports
  - 7.2 Processing vote reports
    - 7.2.1 Central tabulation
    - 7.2.2 Precinct tabulation (as appropriate)
  - 7.3 Integration with county systems and Calvoter
- 8 **Official Canvass and Post-Election Procedures** – see Diebold procedures
  - 8.1 Election Observer Panel
  - 8.2 Canvassing precinct returns
  - 8.3 Canvassing absentee ballots
  - 8.4 Canvassing provisional ballots
  - 8.5 Canvassing write-in votes
  - 8.6 1% Manual recount procedures
  - 8.7 Handling ballot exceptions (definition of vote, determining voter intent) How to handle various incorrect markings. Guidelines on determining voter intent.
  - 8.8 Post-election logic and accuracy testing
  - 8.9 Final reporting of official canvass
  - 8.10 Back-up and Retention of election material What to back up and how. What materials and reports to retain.
- 9 **Manual Recount procedures** – see Diebold procedures
- 10 **Security**
  - 10.1 Physical security of system and components Describe all physical methods that should be employed for protecting the system, its components and data before, during and after an election – see Diebold procedures. In addition once the Vote-PAD booklets and been setup for a ballot type the booklet shall be sealed using a numbered seal with the numbers entered into a permanent log. Access to the booklets audio tapes and other material shall be limited

to election office personnel and keep in a secure storage area during testing and storage. The booklets, tapes and other material will be treated with the same secure procedures required by the AccuVote units during the election process.

## 10.2 Logical security of system and components

10.2.1 Essential and non-essential services and ports What features, services and ports in the operating system and supporting software should be disabled? What features, services and ports are essential and cannot be disabled? – see Diebold procedures

10.2.2 User-level security Security accounts/roles should be defined such that each level of user has only sufficient privileges to perform the tasks of that role and no more. Please provide sufficient definitions to create these accounts/roles.

10.2.3 Anti-virus protection – see Diebold procedures

10.2.4 Procedures for verifying, checking, and installing essential updates and changes These changes are primarily for installing critical updates to operating system, anti-virus protection or other third-party elements related to security and error correction. – see Diebold procedures

10.2.4.1 10.2.4.1. Audit records for the changes showing what, when, who, and why – see Diebold procedures

10.2.4.2 10.2.4.2. Installation procedures for those updates which would normally be installed using an internet connection – see Diebold procedures

10.2.4.3 Acceptance testing after the installation. – see Diebold procedures

10.3 Security procedures for central processing – see Diebold procedures

10.4 Security procedures for polling places – see Diebold procedures

10.5 Audit trails – see Diebold procedures

## 11 Biennial Hardware Certification and Notification

EC § 19220 requires jurisdictions to examine voting systems every two years and certify the results to the Secretary of State. Requirements for examination and testing are further detailed in Article 15 of the Secretary of State Procedures for Approving, Certifying, Reviewing, Modifying, and Decertifying Voting Systems, Vote Tabulating Systems, Election Observer Panel Plans, and Auxiliary Equipment, Materials, and Procedures.